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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.         | CONFIRMATION NO.       |
|---|-------------|----------------------|-----------------------------|------------------------|
| 09/879,438  | 06/12/2001  | Michael Miettinen    | 442-010339-US(PAR)          | 3541                   |
| 7590<br>Perman & Green<br>425 Post Road<br>Fairfield, CT 06430-6232 |             | 05/02/2007           | EXAMINER<br>PILLAI, NAMITHA |                        |
|   |             |                      | ART UNIT<br>2173            | PAPER NUMBER           |
|   |             |                      | MAIL DATE<br>05/02/2007     | DELIVERY MODE<br>PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |   |  |
|------------------------------|--------------------------------------|---|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>09/879,438 | <b>Applicant(s)</b><br>MIETTINEN ET AL. |  |
|                              | <b>Examiner</b><br>Namitha Pillai    | <b>Art Unit</b><br>2173                 |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 February 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 17-32, 34-38 and 40-56 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 17-32, 34-38 and 40-56 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Amendment*

1. The Examiner acknowledges Applicant's submission on 2/15/07. All pending claims have been rejected where the previous rejection has been maintained.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 17-32, 34-38, 40-47 and 49-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahara and U. S. Patent No. 6, 236, 398 B1 (Kojima et al.), herein referred to as Kojima.

As per claims 17 (method), 24 (device), and 52 (user interface), Takahara discloses a method for recognizing a selection a set of at least two alternatives (column 1, lines 11-14), the method comprising:

Takahara discloses determining the positions corresponding to each alternative in the space surrounding a user on the basis of their direction with respect to the user so that the locations of the positions remain substantially the same with respect to user irrespective of the location of the user (Figure 1 and column 2, lines 55-67). Takahara teaches the user surrounded by alternatives within a three dimensional space, with the positions being respective to the user irrespective of the location of the user within this three dimensional space.

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Takahara discloses allowing the user to carry out a first movement for moving a member of the body to a position corresponding to an alternative the user desires with the holding of the alternative being the first movement (column 4, lines 4-8).

Takahara discloses recognizing a second movement carried out by the user in the position corresponding to the alternative the user desires and in response to the second movement, recognizing the selection the user desires as completed. Takahara disclosing the flipping as the second movement and with this flipping movement by the arm determining that the user chooses to delete a selected alternative. See column 4, lines 4-8.

Takahara also discloses providing the recognizing selection as an output with the output displaying deleting of the alternative.

Takahara, however, does not disclose that the alternatives surround the user and that the positions are sectors on an arcuate area and first movement comprises moving the member of the body to a certain sector on said arcuate area.

Kojima discloses a method for selecting alternatives in an environment as shown in Figure 2. The user is surrounded by the alternatives at distinct positions as shown in Figure 2 of Kojima. See column 6, lines 22-26. Furthermore, the area surrounding the user with the alternatives include that the positions of the alternatives, which are the icons, are on an arcuate area. The arcuate area holds the positions of the alternatives a-h. The movement of rotation involves using the knob by a member of the body to a certain sector of the arcuate area, the sector including an icon alternative that is to be selected.

It would have been obvious to one having ordinary skill in the art at the time the invention to learn from Kojima to display alternatives that surround a user with an arcuate area and moving the member of the body to a certain sector on the arcuate area. Both Takahara and Kojima disclose environments, which include alternatives that can be chosen by the user. Takahara further points out that the importance in viewing and accessing as much of the large amounts of data (column 1, lines 17-21), where Kojima by teaching that the alternatives surround the user rather than just in front of the user, teaches displaying more of the large amounts of data at one time. Displaying more of the large amounts of data to the user at one point would allow for the user to access data that is desired from a large pool of alternatives. Therefore, one skilled in the art at the time of the invention would have been motivated to learn from Kojima to display alternatives that surround a user with an arcuate area and moving the member of the body to a certain sector to access data on the arcuate area.

As per claim 45 (system), due to the mostly similarity of this claim to that of claim 17 (method), except for the system comprising: a central processing unit, a three dimensional display device, the central unit comprising communication means for communicating positions corresponding to selection alternatives to the three dimensional display device are taught by Takahara (column 5, lines 25-42). This claim is therefore rejected for the reasons as set forth above. Takahara further discloses that on the basis of the direction with respect to the user so that locations of the position remain substantially the same with respect to the user irrespective of the location of the user. Takahara teaches that the elements displayed for the user to access are in

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distinct positions, where based on movements made by the user, and the direction the user takes with the hand movements, the locations of the positions of the elements remain the same with respect to the user, and with respect to changes in movements made by the user. See column 4, lines 1-10.

As per claims 18 (method) and 25 (device), Takahara and Kojima discloses showing virtual images in each position showing an arcuate area with a plurality of sectors at the level of the user's waist (Kojima, Figure 2). Takahara and Kojima disclose the sectors of the arcuate area corresponding to the positions of the alternatives and informing the alternative corresponding to a position audiophonically (Kojima, column 10, lines 20-55).

As per claims 19 (method) and 26 (device), the limitation of demonstrating to the user the alternative indicated at any given time is taught by Takahara (column 2, lines 48-51), where the displayed alternatives are accessible to the user at any time. These claims are therefore rejected for the reasons as set forth above.

As per claims 20 (method) and 27 (device), the limitation of recognizing the second movement contactlessly is taught by Takahara (column 8, lines 26-32), with the flipping indicating placing a finger in a certain position. These claims are therefore rejected for the reasons as set forth above.

As per claims 21 (method) and 28 (device), the limitation of wherein the first movement is the movement of the user's hand is taught by Takahara (column 7, lines 1-5), the cited example teaching how the hand is used to initiate an input command. These claims are therefore rejected for the reasons as set forth above.

As per claim 22 (method), the limitation of carry out the first function in response to the output is taught by Takahara (column 4, lines 4-6). This claim is therefore rejected for the reasons as set forth above.

As per claims 23 (method) and 30 (device), the limitation of allowing the user to carry out certain second activity with a specific third movement of the member of the body is taught by Takahara (column 4, lines 5-15), teaching a third movement that allows for user to input a different command for a activity desired on the selected alternative. These claims are therefore rejected for the reason as set forth above.

As per claim 29 (device), the limitation of carrying out a first function in response to the second movement is taught by Takahara (column 4, lines 4-6), the second movement resulting in deleting a selected alternative. This claim is therefore rejected for the reasons as set forth above.

As per claim 31, the limitation of recognizing the second movement carried out by the user in the position are adapted to be attached to the user is taught by Takahara (column 4, lines 4-8), with the flipping command being attached to the user as the user carries out this command on a selected alternative. This claim is therefore rejected for the reason as set forth above.

As per claims 32 (device) and 46 (system), Takahara discloses that the device includes a mobile station (reference number 116, Figure 1), a television apparatus (reference number 100, Figure 1) and an electronic book (reference number 70, Figure 17).

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As per claims 34 (method), 40 (device), and 49 (system), Takahara and Kojima disclose that the arcuate area is a selection disc (Kojima, Figure 2).

As per claims 35 (method) and 41 (device), Takahara and Kojima disclose that the first movement is substantially horizontal arcuate movement of the hand to a certain sector of the arcuate area situated substantially in a horizontal plane (Takahara, Figures 7 and 9), where an example of a first movement taught in Takahara teaches the movement of the hand is a horizontal movement. The combination of Takahara and Kojima disclose the horizontal hand movements within an arcuate area.

As per claims 36 (method) and 42 (device), Takahara discloses that the second movement is a substantially vertical movement of a hand at a certain sector (Figure 4 and column 8, lines 18-25), with the movement command taught in this cited example including a vertical movement of the hand and the fingers for determining this command.

As per claims 37 (method) and 43 (device), Takahara discloses that the second movement is placing a hand into a certain position at the certain sector (column 4, lines 4-8), where flipping involves placing a hand into a certain position at the certain sector of the alternative to be selected.

As per claims 38 (method) and 44 (device), the limitation of determining the positions corresponding to each alternative in the space surrounding a user also on the basis of their distance with respect to the user is taught by Takahara (column 2, lines 55-65), where the alternatives are placed with respect to the user based on distance for



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sight and movement of body relative to the alternatives. These claims are therefore rejected for the reasons as set forth above.

As per claim 47, the limitation of recognizing is a camera is taught by Takahara (column 14, lines 3-6). This claim is therefore rejected for the reasons as set forth above.

As per claim 50, the limitation of wherein the three-dimensional display device and the means for recognizing are comprised in the same unit is taught by Takahara (column 5, lines 25-45). This claim is therefore rejected for the reasons as set forth above.

As per claim 51, Takahara discloses that the three dimensional display device is virtual glasses (Figure 1 and column 5, lines 30-32).

Referring to claims 53-56, Takahara discloses allowing the user to do the first movement of a member of the body allows the user to move a first member of the body and the recognizing of the second movement recognizes the movement of a second member of the body. Takahara discloses that the first and second members of the body are a common member of the body of the user and the first member of the body the body is a hand and the second member of the body is the fingers of the hand.

Takahara teaches movements including first and second movements that require movement of the hand and further movement of the fingers for the users to choose a command to be applied to a selected alternative.

3. Claim 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takahara and Kojima and further in view of Kumar et al. (USPN: 6,624,833) hereinafter Kumar.

As per claim 48, Takahara-Kojima discloses the invention substantially as claimed above. Takahara-Kojima, however, do not disclose the limitation of wherein the means for recognizing is a shape tape.

Kumar discloses the limitation of recognizing is a shape tape as the technique of the system 10 can of course be utilizing with other types of information processing devices (see col. 5, lines 33-34).

It would have obvious to one having ordinary skill in the art at the time the invention was made to include Kumar's teaching of recognizing is a shape tape into that of Takahara-Kojima combined invention. By doing so, the system would be enhanced by capable of allowing user to select shape tape device for recognizing and recording user movement in virtual environment.

#### ***Response to Arguments***

4. Applicant's arguments filed 2/15/07 have been fully considered but they are not persuasive.

Applicant has argued that Kojima has no disclosure related to moving a member of the body to a certain sector on an arcuate area. Kojima discloses as shown in Figure 2, how the user is placed in the middle of an arcuate area and how rotation movement is used to select an appropriate sector of the arcuate area of Figure 2. Although a knob maybe involved in the selection process, it is the user's body and movement with the

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body and the knob that enables the selection of the desired area. User movement along with the knob would be necessary to traverse the area that is surrounding the user to select a desired sector of the arcuate area.

***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action. Responses to this action should be submitted as per the options cited below: The United States Patent and Trademark Office requires most patent related correspondence to be: a) faxed to the Central Fax number (571-273-8300) b) hand carried or delivered to the Customer Service Window (located at the Randolph Building, 401 Dulany Street, Alexandria, VA 22314), c) mailed to the mailing address set forth in 37 CFR 1.1 (e.g., P.O. Box 1450, Alexandria, VA 22313-1450), or d) transmitted to the Office using the Office's Electronic Filing System. Any inquiry concerning this communication or earlier communications

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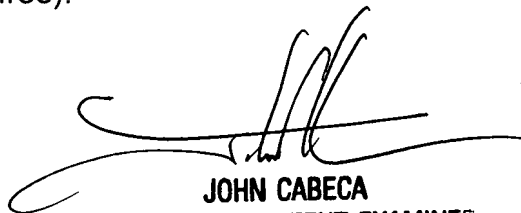
from the examiner should be directed to Namitha Pillai whose telephone number is (571) 272-4054. The examiner can normally be reached on 8:30 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cabeca can be reached on (571) 272-4048.

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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April 26, 2007



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